Center for Genetic Improvement in Livestock

Director Noelle Cockett, Ph.D., Utah State University, Logan, Utah
(Phone 797-3903, Fax 797-3904, e-mail:fanoelle@cc.usu.edu)

Background

Established in 1991 to outline methods of genetically improving livestock using the rapidly evolving technologies of DNA genetic markers and embryo cloning.

FY94-95 Overview

Current

1994-95 Award	$98,500
Matching Funds	219,485
Patents Pending	1
Patents Issued	0
License Agreements	0
Spin-off Companies	0
Companies Assisted	15
Industry Jobs Created	0
Center Jobs Created	6

Cumulative Overview

Cumulative

Awards	$198,000
Matching Funds	$566,985
Patents Issued	0
License Agreements	0
Spin-off Companies	0

Technologies

- Specific genetic markers, known as callipyge genes, associated with heavy muscling and reduced fat in sheep have been identified.
- The improvement of embryo cloning efficiency.
- The Center has developed a test that is 97% accurate in identifying the callipyge gene; no other laboratory in the world has the available information and, therefore cannot duplicate the test.

Center Highlights

- The Center has determined that the callipyge gene provides an **additional $16.06 (10.3%)** to the value of each marketed sheep. If just 25% of the sheep in Utah carried the callipyge gene, the potential added value impact to Utah would be $1.4 million.
- Development of a **commercially-available** genetic marker test for callipyge has been initiated, with its availability being **advertised** through publications, presentations, and other means, with efforts primarily directed toward sheep producers and meat packers.
- The differences in muscle mass in sheep **significantly affect retail yield** and the percentage of carcass weight found within the high-priced cuts.
- It has been determined that callipyge animals require less feed for each pound of gain (another **economic advantage** of the mutation).
- Animals carrying the callipyge gene are being distributed to Utah sheep producers.